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Physics Abstracts

Science Abstracts Series A
July – December 1984

Subject Index (M – Z)

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SIX-MONTHLY INDEXES TO PHYSICS ABSTRACTS

Twice a year as part of their subscription to Physics Abstracts subscribers receive cumulative indexes for the periods January-June and July-December. Each index is in two parts—a Subject Index, and an Author Index which comprises personal and corporate author indexes, and indexes to conferences, book titles, and bibliographies. The List of Journals and other Serial Sources abstracted by INSPEC in the particular year is also included with the July-December issue of the Author Index while the supplement to that List is included with the January-June issue. Cumulative indexes for earlier years are also available: for details please see the inside back cover.

Subject index

The Subject index provides an alphabetical subject key to the articles included in the abstracts journal. Some general guidance on its use is given below:

1. Look in the index for the name of the specific subject in which you are interested. In most cases this name will be a heading in the index and you will find relevant articles listed under it. The majority of the subject headings fall into the following categories: property, phenomena, substance or named objects, instrument, device, theory, method, process, application, event.
2. Occasionally you will be directed from the subject heading chosen to a different heading under which the relevant or additional articles are listed.
3. If you do not find the subject heading you first chose, try a more general heading.
4. Each entry under the heading relates to an article appearing in the abstracts journal and gives the serial number of that article in the journal preceded by the last digit of the current year, e.g. 4-12345; i.e. Abstract number 12345 in the abstracts journal for 1984.

The language of the article, if it is not in English, is also indicated. e.g. Photo-induced CVD (Japanese) 4-40669.

Each entry starts with a Keyword or Keyphrase considered to be most relevant to the heading. On sorting these Keywords, the qualifying prefixes are usually ignored. (e.g. α -brass, 5-sulphosalicylic, 31 Cygni, n-Ge are sorted under brass, sulphosalicylic, Cygni, Ge respectively).

There are three main Keyword lists: alphabetical A-Z, elementary particles, and chemical symbols (organic substances are written and not given as chemical formula). More than one Keyword list may be present under each subject heading.

For document on, say, 'photoemission of germanium' at least two access points 'photoemission' and 'germanium' are provided. Under the heading 'photoemission' the Keyword will be 'Ge' and under 'germanium' the Keyword will be 'photoemission'.

In a case like this, it is advisable and quicker to use the heading 'photoemission' and go straight to the chemical symbol list for 'Ge'.

Intermetallic compounds are indexed under the appropriate alloy headings. The chemical formula is used as Keyword. However, it is important to realise in searching the chemical symbol list that, at present, alloys and intermetallic compounds are sorted separately. For example FeCo is sorted at the end of the Fe- list e.g. Fe-Al,... Fe-Co,... Fe-Si,... Fe-Si-B,... FeCo,... FeSi and so on in this order.

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Major elements and compounds are used in the descriptions in all CASPER Formulations. Subject Indexes and Abstracts should be readily understood in the context of the subject headings. Inorganic substances are usually given by their chemical formulae. Ions and aluminium species appear in the form of Al^{3+} , Mg^{2+} and Ca^{2+} (where M is a metal element, e.g. Yb and YAg). Zr^{4+} , Hf^{4+} , Ti^{4+} and Ce^{4+} hydroxides appear as PLZT , PZT and GLZT respectively. Organic substances are not given as formulae but as common abbreviations are used.

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Abbreviations and Acronyms

Abbreviations and acronyms are used in the modifiers in all INSPEC Cumulative Subject Indexes. Individual terms should be readily understood in the context of the subject headings. **Inorganic substances** are usually given by their chemical formulae. Iron and aluminium garnets appear in the formulae lists as MIG and MAG (where M is metal element, e.g. YIG and YAG); $(\text{Pb},\text{La})(\text{Zr},\text{Ti})\text{O}_3$, $\text{Pb}(\text{Zr},\text{Ti})\text{O}_3$ and $\text{Ce}_2\text{Mg}_3(\text{NO}_3)_{12}$ appear as PLZT, PZT and CMN respectively. **Organic substances** including **liquid crystals** are not given as formulae but common abbreviations are used.

ABS resin	acrylonitrile-butadiene-styrene	CBOOA	cyanobenzylidene octyloxyaniline
AC	alternating current	CCBA	coupled channel Born approximation
ACV	air cushion vehicle	C-CD	charge-coupled device
A/D	analogue-to-digital	CCL	capacitor-coupled logic
ADC	analogue digital conversion	CDFR	commercial demonstration fast reactor
ADP	administrative data processing	CDI	collector diffusion isolation
AE	acoustic emission	CDM	code division multiplexing
AEC	atomic electron correlation(s)	CDW	charge-density wave
AES	Auger electron spectra(oscopy)	CEM	channel electron multiplier
AF	audio frequency	CEPA	coupled electron pair approximation
AFC	automatic frequency control	CERN	Conseil Européen pour la Recherche Nucléaire
AFL	abstract family of languages	CESR	conduction electron spin resonance
AFMR	antiferromagnetic resonance	CGTO	contracted Gaussian-type orbital
AGC	automatic gain control	CHF	coupled Hartree-Fock
AGR	advanced gas-cooled reactor	CI	configuration interaction
ALARA	as low as reasonably achievable	CIDEP	chemically induced dynamical electron polarisation
ALU	arithmetic logic unit	CIDNP	chemically induced dynamical nuclear polarisation
AM	amplitude modulation	CIH	charge iterated extended Huckel
APACHE	accelerator for physics and chemistry of heavy elements	CIHY	configuration interaction Hylleras
APR	acoustic paramagnetic resonance	CIM	constituent interchange model
APS	appearance potential spectra(oscopy)	CMI	computer managed instruction
APW	augmented plane wave	CML	current-mode logic
ARMA	autoregressive moving average	CMOS	complementary metal-oxide-semiconductor
ASCII	American standard code for information exchange	CNC	computerised numerical control
ATC	air traffic control	CNDO	complete neglect of differential overlap
ATE	automatic test equipment	COC	cholesteryl oleyl carbonate
ATM	Axilrod-Teller-Moto	COM	computer output to microform (fiche or film)
ATR	attenuated total reflection	COOB	4,4'-cyano-octyloxy-biphenyl
ATWS	attenuated transients without scram	CP	charge, parity
AVC	automatic volume control	CPA	coherent potential approximation
BARITT	barrier injection transit time	CPA	critical path analysis
BBEA	4-butoxybenzal-4'-ethylaniline	CPM	critical path method
BBGKY	Bogoliubov-Born-Green-Kirkwood-Yvon	CPSK	coherent phase shift keying
BCC	body centred cubic	CPT	charge, parity, time
BCD	binary-code decimal	CPU	central processing unit
BCS	Bardeen-Cooper-Schrieffer	CRO	cathode ray oscilloscope
BFL	buffered FET logic	CRSR	coherent resonant Stokes rotation
BFO	beat-frequency oscillator	CRT	cathode ray tube
BH	buried heterostructure	CS	coupled states
BWO	backward wave oscillator	CSL	current-sinking logic
BWR	boiling water reactor	CSL	current-sourcing logic
BWT	backward wave tube	CSM	continuous slowing down models
C ³ L	complementary constant current logic	CSRS	coherent Stokes-Raman spectra(oscopy)
CAD	computer aided design	CT	computerised tomography
CANDU	Canadian deuterium uranium	CTL	complementary-transistor logic
CAE	computer aided engineering	CTR	controlled thermonuclear reactor
CAI	computer assisted instruction	CVD	chemical vapour deposition
CAM	computer aided manufacturing	CW	continuous wave
CARS	coherent antiStokes Raman scattering (spectra)	D/A	digital-to-analogue
CATV	community antenna TV		
CB	citizen band		
CBI	computer based instruction		

DAC	digital analogue conversion	EDA	ethylene diamine
DBMS	database management system	EDP	electronic data processing
DBR	distributed Bragg reflector	EDTA	ethylene diamine tetra-acetic acid
DC	direct current	EEBAC	ethyl-4-(4'-ethoxy-benzylidene-amino) cinnamate
DCFL	direct-coupled FET logic	EEG	electroencephalography (-gram)
DCTL	direct-coupled transistor logic	EELS	electron energy loss spectra(scopy)
DDC	direct digital control	EEPROM	electrically erasable programmable read-only-memory
DDL	diode-diode logic	EFL	emitter-follower logic
DECENT	distribution of exact classical energy transfer	EFL	emitter-function logic
DESY	Deutsches Electron Synchrotron	EFM	extended Flygare method
DF	Dirac-Fock	EFT	electronic funds transfer
DFB	distributed feedback	EHD	electrohydrodynamics
DH	double heterostructure	EHF	extremely high frequency
DIL	dual-in-line	EHP	electron-hole potential method
DIP	dual in-line package	EHT	extended Hückel theory
DITE	divertor in torus experiment	EHV	extra high voltage
DLTS	deep level transient spectra(scopy)	ELDOR	electron electron double resonance
DM	delta modulation	ELF	extremely low frequency
DMA	direct memory access	EM	electromagnetic
DMM	digital multimeter	EMC	electromagnetic compatibility
DMOS	double diffused metal-oxide-semiconductor	EMF	electromotive force
DMSO	dimethylsulphoxide	EMG	electromyography (-gram)
DNA	deoxyribonucleic acid	EMI	electromagnetic interference
DNMR	double nuclear magnetic resonance	EMP	electromagnetic pulse
DOBAMBC	p-decyloxybenzylidene p'-amino 2-methyl butyl cinnamate	ENDOR	electron nuclear double resonance
DOD	different orbitals for different spins	ENG	electronic newsgathering
DORIS	Dopple-ring-Speicher	EOF	end of file
DOS	disc operating system	EPEN	empirical potential energy function based on interactions of electrons and nuclei
DOVETT	double velocity transit time	EPMA	electron probe microanalysis
DP	data processing	EPR	electron paramagnetic resonance
DPCM	differential pulse code modulation	EPRI	Electric Power Research Institute
DPPH	diphenylpicrylhydrazyl	EPROM	erasable programmable read-only-memory
DPSK	differential phase shift keying	ERG	electroretinography (-gram)
DSAM	Doppler shift attenuation method	ESCA	electron spectroscopy for chemical analysis
DSC	differential scanning calorimetry	ESCAR	experimental superconducting accelerating ring
DTA	differential thermal analysis	ESFI	epitaxial silicon film on insulator
DTL	diode transistor logic	ESS	electronic switching system
DTU	dual topological unitarisation	EUV	extreme ultraviolet
DVM	digital voltmeter	EW	electronic warfare
DV-X α	discrete variational X α method	EXAFS	extended X-ray absorption fine structure
DWBA	distorted wave Born approximation	EX-OR	exclusive-OR (logic)
DWIA	distorted wave impulse approximation	FAMOS	floating gate avalanche metal-oxide semiconductor
E1,E2	electric dipole, quadrupole	FBR	fast breeder reactor
E ² PROM	electronically erasable read-only-memory	FCC	face centred cubic
EAROM	electronically alterable read-only-memory	FDM	frequency division multiplex(ing)
EAS	extensive air shower	FDNC	frequency dependent negative conductance
EB	exponential Born	FDNR	frequency dependent negative resistance
EBBA	4-ethoxybenzylidene-4'-n-butylaniline	FECL	feedback ECL
EBIC	electron beam induced current(s)	FEM	field emission microscopy
EBR	experimental breeder reactor	FET	field effect transistor
EBT	Elmo Bumpy Torus	FFHR	fusion-fission hybrid reactor
ECCM	electronic counter-counter measures	FFT	fast Fourier transform
ECCS	emergency core cooling system		
ECELR	epithermal critical experiment laboratory reactor		
ECG	electrocardiography (-gram)		
ECL	emitter coupled logic		
ECM	electronic countermeasures		

FFTF fast flux test facilities
FHNC Fermi hypernetted chain
FIM field ion microscopy
FIMOS floating gate ionisation injection metal-oxide-semiconductor
FIR finite impulse response
FM frequency modulation
FMIT fission materials irradiation test facility
FMR ferromagnetic resonance
FMSR fast mixed spectrum reactor
FPT finite perturbation theory
FPLA field programmable logic array
FSK frequency-shift keying
FSGO floating spherical Gaussian orbitals
FTR fast test reactor

GAMBIT gate modulated bipolar transistor
GANIL grand accélérateur national a ions Lourds
GCFR gas-cooled fast breeder reactor
GCM generator coordinate method
GDR giant dipole resonance
GHF-NO-CI generalised Hartree-Fock/natural orbital/configuration interactions
GIAO gauge-invariant atomic orbitals
GMR giant monopole resonance
GO Gaussian orbitals
GOO generalised Overhauser orbitals
GPM ground potential model
GQR giant quadrupole resonance
GRIN graded (gradient) refractive index
GSPC gas scintillation proportional chamber (or counter)
GTO Gaussian-type orbitals
GUT grand unified theory
GVB generalised valence bond

HAM hydrogenic atoms in molecules
HBAB hexyloxybenzylidene-p'-aminobenzo nitrile
HBT N-(p-hexyloxybenzylidene)-p-toluidene
HCDA hypothetical core disruptive accident
HCP hexagonal close packed
HEED high energy electron diffraction
HEMP high altitude electromagnetic pulse
HEMT high electron mobility transistor
HF high frequency or Hartree-Fock
HFB Hartree-Fock-Bogoliubov
HFEF hot fuel examination facility
HFIR high flux isotope reactor
HFO Hartree-Fock-Overhauser
HFS hyperfine structure
HGMS high gradient magnetic separation
HIXE heavy ion induced X-ray emission
HJFET heterojunction field effect transistor
HLW high level waste (radioactive)
HMO Huckel molecular orbitals
HMTSeF hexamethylenetetraselenafulvalene (-inium)
HMTTF hexamethyltetrathiofulvalene(-inium)
HOAB heptyloxyazoxybenzene

HOBHA p-n-heptyloxy-benzylidene-p-n-heptyl-aniline
HOMO highest occupied molecular orbitals
HTGR high temperature gas-cooled reactor
HV high voltage
HVDC high voltage direct current
HVEM high voltage electron microscopy
HWR heavy water reactor
IAEA International Atomic Energy Authority Agency
IAR isobaric analogue resonance
IAS isobaric analogue state
IBA interacting boson approximation
IBFA interacting boson-fermion approximation
IBM interacting boson model
IBPBAC isobutyl-4-(4'-phenylbenzylideneamino) cinnamate
IC integrated circuit
ICDF intermediate coupling Dirac-Fock
ICF inertial confinement fusion
IDT interdigital transducer
IEPA independent electron pair approximation
IETS inelastic electron tunnelling spectroscopy
IF intermediate frequency
IFA ionisation front accelerator
IGFET insulated gate field effect transistor
IIR infinite impulse response
IKO Institute v. Kernph Ouder Amsterdam
I²L integrated injection logic
I³L isoplanar I²L
ILS instrument landing system
IMPATT impact avalanche transit time
INDO intermediate neglect of differential overlap
INDOR internuclear double resonance
ING intense neutron generator
INO iterative natural orbital
INTELSAT international telecommunications satellite consortium
I/O input/output
IOC- ω inclusion of the overlap charges in the omega
IPSS international packet switching service
IR infrared
IRDO intermediate retention of differential overlap
IREB intense relativistic electron beam
IREL infrared emitting diode
IRS information retrieval system
ISABELLE intersecting storage and acceleration
ISDN integrated services digital network
ISFET ion-sensitive field effect transistor
ISL integrated-Schottky logic
ISR intersecting storage ring
ISX impurity study experiment
ITC ionic thermocurrents
ITEP Institute of Theoretical and Experimental Physics
ITR ignition test reactor
IU Indiana University

IVO	improved virtual orbitals	MEDO	multipole expansion of diatomic overlap
JAERI	Japan Atomic Energy Research Institute	MESFET	metal-semiconductor field effect transistor
JET	Joint European torus	MF	medium frequency
JFET	junction field effect transistor	MFP	mean free path
JINR	Joint Institute for Nuclear Research	MHD	magnetohydrodynamics
KdV	Korteweg-de Vries	MIC	microwave integrated circuit
KEK	Japan National Laboratory for High Energy Physics	MID	magnetically insulated diode
KKR	Korringa-Kohn-Rostoker	MIDP	microwave induced delayed phosphorescence
LAMPF	Los Alamos meson physics facility	MIEHM	modified iterative extended Huckel method
LC	inductance-capacitance	MIM	metal-insulator-metal
LCAO	linear combination of atomic orbitals	MIMD	multiple input multiple data
LCBO	linear combinations of (semi-localised) band orbitals	MIS	metal-insulator-semiconductor or management information system
LCD	liquid crystal display/device	MIT	Massachusetts Institute of Technology
LCGO	linear combination of Gaussian orbitals	MM	millimetre
LCP	large coil program	MMF	magnetomotive force
LCRO	linear combination of Rydberg orbitals	MMIC	monolithic microwave integrated circuit
LEC	liquid encapsulated Czochralski	MNOS	metal-nitride-oxide-semiconductor
LED	light emitting diode	MO	molecular orbitals
LEED	low energy electron diffraction	MOCIC	molecular orbital constraint of interaction coordinates
LEP	large electron positron	MOCVD	metal-organic chemical vapour deposition
LET	linear energy transfer	MODPOT	model potential
LF	low frequency	MOS	metal-oxide-semiconductor
LMC	Large Magellanic Cloud	MOSFET	metal-oxide-semiconductor field effect transistor
LMFBR	liquid metal fast breeder reactor	MOST	metal-oxide-semiconductor transistor
LMTD	linear combination of muffin tin orbitals	MRD	multi-reference double excitation
LNG	liquefied natural gas	MRINDO	modified Rydberg INDO
LOCA	loss of coolant accident	MS	management science
LOCE	loss of coolant experiment	MSI	medium scale integration
LOQOS	local oxidation of silicon	MSK	minimum shift keying
LOFT	loss of flow test facility	MSR	molten salt reactor
LPE	liquid phase epitaxy	MSU	Michigan State University
LPFL	low pinchoff-voltage FET logic	MSW	magnetostatic waves
LSA	limited space charge accumulation	MTBF	mean-time between failures
LSD	local spin density	MTF	modulation transfer function
LSI	large-scale integration	MTL	merged-transistor logic
LTE	local thermodynamic equilibrium	MTX α	muffin-tin X α
LUMO	lowest unoccupied molecular orbitals	MUF	maximum usable frequency
LV	low voltage	MWPC	multiwire proportional chamber
LWBR	light water breeder reactor	NAL	National Accelerator Laboratory
LWR	light water reactor	NAND	not-and(logic)
MADO	Mulliken approximation for differential overlap	NC	numerical control
M1,M2	magnetic dipole, quadrupole	NCMET	non-closed shell many electron theory
MBBA	4-methoxybenzylidene-4'-n-butylaniline	NDDO	neglect of diatomic differential overlap
MBE	molecular beam epitaxy	NDT	nondestructive testing
MBPT	many body perturbation theory	NEMO	non-empirical molecular orbitals
MCD	magnetic circular dichroism	NEVE	non-empirical valence-electron
MCP	microchannel plate	NHS	National Health Service
MCSCF	multiconfiguration self-consistent-field	NIC	negative impedance converter
MCPESCF	multiconfiguration paired excitation SCF	NMOS	N-channel metal-oxide-semiconductor
MCZDO	multi-centre zero differential overlap	NMR	nuclear magnetic resonance
MCX α	multiconfiguration X α	NMR-ON	NMR on oriented nuclei
MEC	molecular electron correlation(s)	NNDO	neglect of non-neighbour differential overlap
		NOR	not-or(logic)

NQR	nuclear quadrupole resonance	PMDR	phosphorescence microwave double resonance
NRC	nuclear regulatory committee	PMOS	P-channel metal-oxide-semiconductor
NRM	natural remanent magnetisation	PMR	proton magnetic resonance
NSSS	nuclear steam supply system	PND0	partial neglect of differential overlap
NTL	nonthreshold logic	PNO-CI	pair natural orbital configuration interaction
NT0	natural transition orbitals	POL	pair orthogonalised Lowdin
OCR	optical character recognition	POP AE	protons on protons and electrons
ODMR	optical detection of magnetic resonance	POPOP	phenyl-oxazolyl-phenyl-oxazolyl-phenyl
OEM	original equipment manufacture	POS	point of sale
OER	oxygen enhancement ratio	PPDP/S	Pariser-Parr-Del Bene-Pople/Segal calculations
OPHF	orbital polarised Hartree-Fock	PPI	plan position indicator
OPW	orthogonal plane wave	PPM	pulse position modulation or parts per million
OR	operations research	PPP	Pariser-Parr-Pople
ORELA	Oak Ridge electron linear accelerator	PRDDO	partial retention of diatomic differential overlap
ORNL	Oak Ridge National Laboratory	PRF	pulse recurrence (repetition) frequency
OS	operating system	PROM	programmable read-only-memory or Pockels readout optical modulator
OTEC	ocean thermal energy conversion	PS	proton synchrotron (CERN)
OTF	optical transfer function	PSK	phase shift keying
PAA	paraazoxyanisole	PTFE	polytetrafluoroethylene
PABX	private automatic branch exchange	PTM	pulse time modulation
PAC	perturbed angular correlation	PVC	polyvinyl chloride
PAHR	post accident heat removal	PWA	partial wave analysis
PAM	pulse amplitude modulation	PWB	printed wiring board
PAP	paraazoxyphenetole	PWBA	plane wave Born approximation
PBF	power bursts facility	PWIA	plane wave impulse approximation
PBR	pebble bed reactor	PWM	pulse width modulation
PBT	permeable base transistor	PWR	pressurised water reactor
PBX	private branch exchange	QAM	quadrature amplitude modulation
PC	printed circuit	QCD	quantum chromodynamics
PCAC	partially conserved axial currents	QDMBPT	quasi-degenerate many-body perturbation theory
PCB	printed circuit board	QED	quantum electrodynamics
PCES	phase change energy storage	QPM	quark-parton model
PGGBV	pairwise correlated generalised valence bond	QPSK	quaternary phase shift keying
PCILOCC	perturbative configuration interaction using localised orbitals for crystal calculation	RAM	random access memory
PCM	pulse code modulation	RBE	relative biological effectiveness
PCRV	prestressed concrete reactor vessel	RC	resistance-capacitance
PCX	plasma confinement experiment	RCNDO	Rydberg CNDO
PDX	poloidal divertor experiment	RCS	rapid cycling synchrotron
PEM	photoelectromagnetic	RCTL	resistor-capacitor-transistor logic
PEP	positron electron proton	R & D	research and development
PET	polyethylene terephthalate	RF	radio frequency
PETRA	positron electron tandem ringbeam-schleuniger anlage	RFI	radio frequency interference
PF	power factor	RG	renormalisation group
PFM	pulse frequency modulation	RHEED	reflection high energy electron diffraction
PFR	prototype fast reactor	RHF	restricted Hartree-Fock
PHWR	pressurised heavy water reactor	RINDO	Rydberg INDO
PID(PI,PD)	proportional+integral+differential (derivative)	RKKY	Rudermann-Kittel Kasuya-Yosida
PIXE	proton induced X-ray emission	RLC	resistance-inductance-capacitance
PLA	phase locked arrays or programmable logic array	RMS	root-mean-square
PLBR	prototype large breeder reactor	RNA	ribonucleic acid
PLC	programmable logic control	ROM	read-only memory
PLL	phase locked loops	RPA	random phase approximation
PLT	Princeton Large Torus		
PM	pulse modulation		
PMMA	polymethylmethacrylate		

RPAE	random phase approximation with exchange	SSFL	Schottky-barrier coupled Schottky-barrier gate FET logic
RPM	relaxation potential model or revolutions per minute	SSI	small scale integration
RPV	reactor pressure vessel	SST	supersonic transport
RTG	radioisotope thermoelectric generators	STD	salinity-temperature-depth or subscriber trunk dialling
RTL	resistor-transistor logic	STEC	solar thermal energy conversion
SACCI	symmetry adapted cluster configuration interaction	STEM	scanning transmission electron microscopy
SAMO	simulated ab initio molecular orbitals	STL	Schottky transistor logic
SAR	synthetic aperture radar	STO	Slater-type orbitals
SAW	surface acoustic waves	STOL	short take-off and landing
SCC	stress corrosion cracking	STP	Slater-transfer Preuss
SCF	self consistent field	SUSY GUT	supersymmetric grand unified theory
SCFL	source-coupled FET logic	SW	short wave
SCL	space charge limited	SWR	standing wave ratio
SCPT	self consistent perturbation theory	SXAPS	soft X-ray appearance potential spectrum
SCR	silicon controlled rectifier	TASI	time assignment speech interpolation
SDFL	Schottky-diode FET logic	TBBA	terephthal-butylaniline
SDM	space division multiplexing	TCNE	tetracyanoethylene
SDO	shielded diatomic orbitals	TCNQ	tetracyanoquinodimethane
SED	stochastic electrodynamics	TCR	temperature coefficient of resistance
SEHF	spin extended Hartree-Fock	TDHF	time dependent Hartree-Fock
SEM	scanning electron microscopy	TDM	time division multiplex(ing)
SFE	solar-flare effect	TDMA	time division multiple access
SFL	substrate fed logic	TDMF	time dependent mean field theory
SGEMP	system generated electromagnetic pulse	TDPAC	time differential perturbed angular correlation
SGHWR	steam generating heavy water reactor	TDS	thermal desorption spectra(oscropy)
SHF	superhigh frequency	TE	transverse electric
SHG	second harmonic generation	TEA	transversely excited atmosphere
SICOS	sidewall base contact structure	TEGFET	two-dimensional electron gas field effect transistor
SIMOS	stacked-gate injection metal-oxide-semiconductor	TEM	transverse electromagnetic or transmission electron microscopy
SIMS	secondary ion mass spectra(oscropy)	TEXT	Texas Experimental Tokamak
SIN	Swiss Institute of Nuclear Research	TFTR	Tokamak fusion test reactor
SINDO	scaled INDO	TGA	thermogravimetric analysis
SIS	semiconductor-insulator-semiconductor	TGFB	triglycine fluoroberyllate
SISAM	spectrometer with interference selective amplitude modulation	TGS	triglycine sulphate
SIT	static induction transistor	TGSe	triglycine selenate
SMC	Small Magellanic Cloud	TJS	transverse junction stripe
S/N	signal-to-noise	TLD	thermoluminescent dosimeter(-ry)
SOG	strongly orthogonal geminal	TM	transverse magnetic
SOS	silicon on sapphire	TMI	Three Mile Island
SPA	separated pair approximation	TMMC	tetramethylammonium manganese chloride
SPC	stored program control	TMTSeF	tetramethyltetraselenafulvalene(-inium)
SPEAR	Stanford positron electron asymmetric ring	TMTTF	tetramethyltetrathiofulvalene
SPHF	spin polarised Hartree-Fock	TOP	transient overpower accident
SPIN-CIPSI	spin symmetry adapted generalisation of CIPSI	TNS	The Next Step
SPS	super proton synchrotron (CERN)	TPC	time projection chamber
SREMP	source region electromagnetic pulse	TRAPATT	trapped plasma avalanche triggered transit
SQUID	superconducting quantum interference device	TREAT	transient reactor test facility
SRMCASE	symmetry-restricted-multiconfiguration annihilation of single excitations	TRM	thermoremanent magnetisation
SSB	single sideband	TSC	thermally stimulated currents
SSBW	surface skimming bulk wave	TSEE	thermally stimulated exo-electron emission
SSC	sudden storm commencement	TSeF	tetraselenafulvalinium
		TSeT	tetraselenatetracene
		TTF	tetrathiofulvalinium

TTL	transistor transistor logic	VLBI	very long base line interferometry
TTT	tetrathiotetracene	VLF	very low frequency
TUCA	transient undercooling accident	VLSI	very large scale integration
TV	television	VMOS	vertical channel metal-oxide-semiconductor
TW	travelling wave	VOR	VHF omnidirectional range
TWT	travelling wave tube	VPE	vapour phase epitaxy
		VRC	visual record computer
UART	universal asynchronous receiver/transmitter	VRDDO	variable retention of diatomic differential
UCHF	uncoupled Hartree-Fock		
UCN	ultra cold neutrons	VS	virtual storage
UHF	ultra high frequency or unrestricted Hartree-Fock	VSB	vestigial sideband
UHPs	underground hydroelectric pumped storage	VSEPR	valence shell electron pair repulsion
UHV	ultra high voltage	VSWR	voltage standing wave ratio
UKAEA	United Kingdom Atomic Energy Authority	VTOL	vertical take-off and landing
ULA	uncommitted logic array	VTR	voltage transformation ratio or video tape recorder
ULF	ultra low frequency	VUV	vacuum ultraviolet
UMD	unitised microwave devices	VVER	water moderated water cooled reactors
UPS	ultraviolet photoelectron spectra		
US	ultrasonic	WARC	World Administrative Radio Conference
UV	ultraviolet	WDM	wavelength division multiplex(ing)
		WKB	Wentzel-Kramers-Brillouin
VAD	vapour phase axial deposition	WP	word processing
VB	valence bond	WWER	water moderated water cooled reactors
VCR	video cassette recorder		
VDM	vector dominance model	XPS	X-ray photoelectron spectra
VDU	visual display unit		
VHF	very high frequency	ZEBRA	zero energy breeder reactor assembly
VHSIC	very high speed integrated circuit	ZGS	zero gradient synchrotron
		ZPPR	zero power plutonium reactor

1. The first part of the paper
describes the general theory
of the subject and its
importance in the field.

2. The second part of the paper

3. The third part of the paper

4. The fourth part of the paper
describes the results of the
experiments and the
conclusions drawn from them.

5. The fifth part of the paper
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masking (acoustic) *see* hearing; speech intelligibility

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molecular spectra

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seals (stoppers)

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tensile strength

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